

METHOD AND SYSTEM FOR WIRELESS COMMUNICATIONS USING
DIFFERENT MODULATION TECHNIQUES TO PROVIDE GUARD
TIMES

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Abstract of the Disclosure

10 A method and system for wireless communications between a base
transceiver station and a mobile unit which provides necessary guard
times in the downlink signal burst while maintaining the same bit rate in
both the downlink and uplink signal bursts is disclosed. Downlink signal
bursts are modulated using a first modulation technique and uplink signal
bursts are modulated using a second modulation technique. Preferably,
the first modulation technique is a higher-order than the second
15 modulation technique. The first modulation technique may be 16 QAM
while the second modulation technique may be 4 QAM or $\pi/4$ QPSK.

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